

REMARKS

This Preliminary Amendment accompanies a Request for Continued Examination.

Applicants have amended claims 1 and 17, canceled claims 3, 4 and 18, and added new claims 21-25. Support for the instant amendments and new claims can be found, *e.g.*, in the originally-filed specification at pp. 13-14 and 17-18 and claims 19-20.

Claim Objections

The Office action objected to claims 17 and 18 under 37 CFR § 1.75(c) as being of improper dependent form. In particular, the Office action asserted that these claims “are process claims that improperly depend on a product claims.” For reasons unrelated to this objection, applicants have rewritten claim 17 in independent form and canceled claim 18. In light of these amendments, Applicants ask that this objection be withdrawn.

Claim Rejections

The Office action rejected claims 1-8 and 11-16 under 35 U.S.C. § 103 as unpatentable over *New Type Sportswear Fabrics “Zebra” from Toyoko and Itochu*, JTN Monthly (“Zebra”) in view of the Background section of the instant application.¹ Applicants respectfully submit that the rejection is misplaced, particularly in light of the instant amendments to claim 1.

The Office action alleges that the Zebra reference discloses a fabric with the following features:

- a 33 dtex yarn for the warp and a 41 dtex yarn for the weft;
- a weight of 60 grams per square meter of ripstop fabric;
- tearing strength of 18.6 N in the warp cut direction and 9.8 N in the weft cut direction;
- air permeability of 0.6 cm³/cm²·s;

¹ Although the Office action purports to reject claims 1-8 and 11-16 based on this combination of references, it appears to rely on the Background of the instant application in connection with its rejection of claims 11 and 12 only. The Office action does not rely on the Background of the instant application with respect to any of the features of claim 1.

- although the claimed bending rigidity, fabric thickness and lip width **are not disclosed**, they “are all fabric properties that are directly related to the [foregoing] fabric properties . . . of Zebra.”

(Office action at pages 2-5)

Thus, compared to features of claim 1, the fabric disclosed in the Zebra reference:

- has a warp yarn that is about **32% thicker** than the maximum claimed;
- has a weft yarn that is about **64% thicker** than the maximum claimed;
- has a weight that is **10% heavier** than the maximum claimed;
- despite being a heavier fabric with thicker yarn, has a tear strength in the weft cut direction that is **2% weaker** than the minimum claimed; and
- **does not disclose** the claimed fabric thickness or lip width.

The Office action attempts to overcome these deficiencies in the Zebra reference by arguing that (1) claim 1 is a “product by process” claim and that therefore the Office’s burden of proving obviousness is lessened and (2) the differences between the Zebra reference and the claimed subject matter are mere “changes in size/proportion.” (Office action at pages 3-5) Applicants respectfully disagree with the conclusion of unpatentability. In fact, the Office action fails to make even a *prima facie* case of obviousness. See MPEP § 706.02(j).

With respect to the first point, Applicants have amended claim 1 such that it no longer recites “wherein single side calendaring is conducted on the fabric.” Therefore, treatment of amended claim 1 as a “product by process claim” is improper.

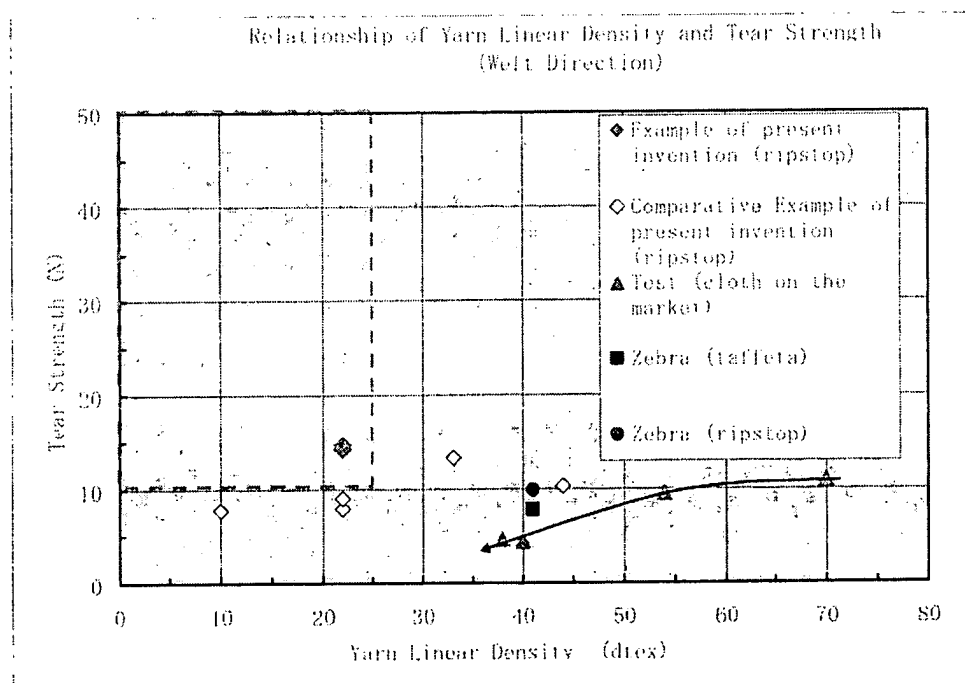
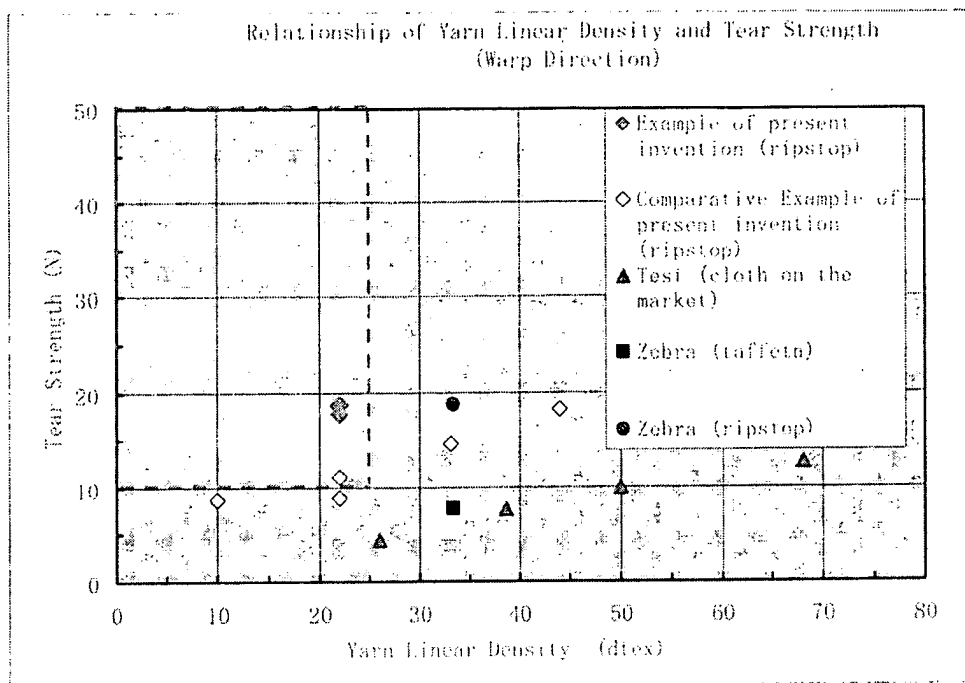
With respect to the second point, Applicants respectfully submit that the Office Action improperly characterizes the differences between the claimed subject matter and the prior art as mere “changes in size/proportion.” As the authority that the Office Action relies upon states, when the “claimed device” performs differently than the prior art, it is not a mere change in size/proportion:

[T]he Federal Circuit held that, where the *only difference* between the prior art and the claims was a recitation of relative dimensions of the

claimed device and a device having the claimed relative dimensions *would not perform differently than the prior art device*, the claimed device was not patentably distinct from the prior art device. (*citing Gardner v. TEC Systems, Inc.*, 725 F.3d 1338 (Fed. Cir. 1984) (emphasis added). (Office action at p. 5).

Applicants respectfully submit that this authority is inapposite to the instant claims at least because the fabric of claim 1 *would perform differently* than the cited art. The Office Action argues that, in light of this authority, it would have been obvious "to product a fabric with the slight variation in weight and yarn linear density claimed." (Office action at 4-5) But the Office Action ignores that the particular weight and yarn linear density are claimed *along with* minimum tear strengths. One of ordinary skill in the art would recognize a direct relationship between weight/yarn linear density and tear strength. Claim 1, however, recites *high* tear strength combined with *low* weight and yarn linear density. This combination is not disclosed by the Zebra reference which instead discloses a heavier fabric with thicker yarns, yet is *weaker* than the fabric claimed. The Office action's implicit argument that one may simply *choose* to decrease weight and yarn linear density while maintaining high tear strength has no support in the references or other evidence of record. (*See* Applicants' comments in prior responses) Applicants' claim 1 recites a fabric whose combination of features is neither disclosed nor rendered obvious by the Zebra reference.

The following discussion of the Zebra reference makes reference to the Warp and Weft graphs, which for ease of reference are reproduced below.



The rectangular area defined by a dashed line illustrates the tear strength and yarn linear density recited in amended claim 1. Two solid diamonds, which represent Examples of the present invention, lie inside of the rectangle in both Warp and Weft graphs. The hollow diamonds represent Comparative Examples described in the specification of the present application. The square represents the taffeta fabric of the Zebra reference, and the circle represents the plot which was drawn from the values of the rip stop fabric of the Zebra reference. In this regard, Applicants submit that it is unclear that the values of the tear strength described in the Zebra reference were measured by the pendulum method. The triangles indicate the plots which were drawn from the values of the result of the experiments which were submitted with the previously-submitted 1.132 Declaration.

As is clear from the plots indicated by the hollow diamonds and the triangles, there is a tendency that the finer a fiber is, the lower the tear strength becomes. This tendency is well-known and appreciated by those of ordinary skill in the art.

The tear strength disclosed in the Zebra reference is higher than the line drawn from the triangles, even though they have the same fineness. However, the plot drawn of the rip stop fabric disclosed in the Zebra reference in the weft direction is 41.1dtex (37 denier) and 9.8N (1000g), and therefore the tear strength of Zebra is less than the lower limit of the tear strength of claim 1. If the fiber of Zebra is made *finer*, one of ordinary skill in the art would not expect that the tear strength would *increase* and that its properties would be inside of the rectangular area at least in weft direction. To the contrary, one of ordinary skill in the art would expect just the opposite result.

Accordingly, Applicants submit that even if a finer fiber is used for Zebra, it is not possible to obtain a fabric similar to that which is set forth in claim 1. Claim 1, as a result of the claimed combination, sets forth a fabric that simultaneously has a low yarn linear density and high tear strength.

Applicants postulate that one reason why the claimed fabric possesses the unexpectedly advantageous characteristics is the increased number of restraint points per unit area, as

discussed in the prior response. Applicants note that the Zebra reference does not disclose any methodology for achieving an increased number of restraint points. For example, the Zebra reference only mentions that "Despite being fine denier and high-density fabrics, 'Zebra' maintains sufficient tear strength because of a new way of finishing," but does not describe what the "new way of finishing" is. Because of the Zebra fabric's substantially inferior properties, one of ordinary skill in the art would understand that the "new way of finishing" mentioned in the Zebra reference differs from that which obtains the features of claim 1.

Accordingly, the Zebra reference fails to disclose or render obvious the subject matter of claim 1 at least because the fabric disclosed in the Zebra reference (1) has a warp yarn that is about 32% thicker than the maximum claimed, (2) has a weft yarn that is about 64% thicker than the maximum claimed, (3) has a weight that is 10% heavier than the maximum claimed, (4) despite being a heavier fabric with thicker yarn, has a tear strength in the weft cut direction that is 2% weaker than the minimum claimed and (5) does not disclose the claimed fabric thickness or lip width. Applicants respectfully submit that a person of ordinary skill in the art, having reviewed the Zebra reference, would not have been able to obtain a fabric having the claimed properties.

Applicants therefore respectfully request allowance of claim 1. Dependent claims 2, 5-8, 11-16 and 24-25 recite additional features and are independently patentable.

New Claims 21-23

New claims 21-23 depend from claim 17, which has been rewritten in independent form. Because claim 17 recites all of the features of claim 1, it is allowable for at least the same reasons. Claims 21-23 recite additional features and are independently patentable.

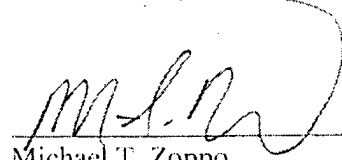
Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper.

The Request for Continued Examination fee of \$810.00 and petition fee of \$130.00 is being paid over the EFS by way of deposit account authorization. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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